California Journal of Educational Research

THE EDITORS SAY:

The Practicability of Practicality . . .

The Ninth Annual Research Conference for educational researchers in California took place last November in the same surroundings, at Santa Barbara, in which had occurred the first such conference, in 1949. Was it the "same old stuff" the ninth time around? This can happen, of course. We are sometimes caught by the cynic who says, "Oh, yes, twenty years of experience—twenty times one equals twenty!"

The ninth conference demonstrated that there is almost always a new and untried way to explore a problem area. The program committee turned the conference into a research clinic. Nine topics were selected in advance and local researchers were invited to go through the analysis of a related, complete research project, under the guidance of a research expert and guide. This was no mere listening to a report of research results. The discussion was not so much concerned with the results as with the research process leading up to these results. Did the process and results jibe, to use non-research jargon? Was the process an appropriate one, to start with? In other words, was the research design good in the light of the problem?

During the day's discussion the conferees were able to turn the "lessons learned" toward an analysis of a particular research project for which they had responsibility. The clinic began to operate upon the conferee's patient. This is what they had really come for. This was a "practical" educational research conference.

The program committee was tickled pink—an extreme form of flattery and compliment, of course—to hear the conferees say repeatedly that the ninth gathering was one of the best that had been planned. The major reason was that they were taking home with them something more valuable than pleasant emotions recollected in tranquillity, wonderful as these may be.

While the committee shall not contend that the ninth meeting was educationally monumental, they are fairly certain that it was an eloquent testimonial to the homely virtue of keeping conference programs close to the customers' needs. The customers will return.

No, inspiration was not left out! You will enjoy in the conference proceedings, the highly stimulating address of Dr. Lee J. Cronbach, University of Illinois. He really clinched the nails that had been driven home the day before. His hammer taps were tops! K.R.B.

Toward a Rationale for Teacher Selection

A. Garth Sorenson

The indispensable components of a selection program are a rationale, a process, a staff, and a means for checking the effectiveness of the first three. Obviously, the most fundamental of these is the rationale. Still, it appears to have been neglected by most of those concerned with the selection of teacher candidates. Evidence of this neglect is to be found in the research on teacher effectiveness, so much of which is characterized by unstated assumptions and poorly defined criterion variables. Further evidence is provided by the ever-present controversy in schools of education over criteria for the selection of students. Faculty members, like research workers, proceed from widely differing and often unstated assumptions. Finally, evidence of an omission to think through a rationale for selection can be found in the practices of placement agencies and of administrators who hire teachers. Individuals in both of these categories may have very positive, but at the same time very different, opinions about the merits of any given candidate. There is no reason to believe that the well-known "halo effect" does not operate freely in their appraisals.

A rationale for teacher selection can be derived from at least three sources. The foremost source is educational philosophy, in particular, beliefs regarding the purpose of the public schools. A second is the concept of the teacher's job, or how he goes about doing what he should do. A third source in the evidence from research related to what is known about how to teach.

In spite of the multiplicity and complexity of these sources, certain assumptions about the purpose of education, the teacher, and his job may be generally acceptable and may serve as a beginning point in the development of a rationale. It is the purpose of this paper to present a few of these assumptions together with their implications for teacher selection.

A. Garth Sorenson is an assistant professor at the University of California at Los Angeles. He was previously an assistant professor at the University of Utah and Assistant Director of the Student Guidance Center of the University of Utah. He received the doctor of philosophy degree from the University of Utah in 1950.

Basic Assumptions About the Teacher and His Job

First of all is the assumption that the purpose of education is to bring about certain changes in the behavior patterns of pupils. Such changes include the addition to, development of, or correction of existing behavior patterns. The changes may be ends in themselves, as when a student learns to appreciate the artistic. They may chiefly represent means to ends, as in the learning of algebra or American history—although both of these will provide intrinsic rewards for some students. Or they may be both means and ends, as in the case of learning to read. While Americans do not agree on all the changes to be brought about, there are some educational objectives which all will accept as basic. Examples of these are reading, writing, and figuring, habits of critical thinking, and the comprehension of such traditions as freedom of speech and freedom of inquiry.

Next, several assumptions can be made regarding the means by which the teacher accomplishes his task. While no complete job analyses are available as yet and while teachers' assignments vary from school to school, the following generalizations appear to be sound.

1. The teacher accomplishes his task partly by serving, insofar as he is able, as a model for his pupils to imitate. This function is most apparent perhaps in the case of the language teacher's purposeful encouragement of students to imitate his speech. But it is significant that pupils also learn to use or misuse language from teachers of arithmetic, shop, and physical education. Likewise, students may learn democratic attitudes or, conversely, racial intolerance from any teacher, whether he be the teacher of social studies or music and whether or not he had intended to teach that particular trait. Students learn more from teachers than just the narrow body of information specific to the course title. Because they learn beliefs, attitudes, mannerisms, and probably some very significant personality traits, the idea of the teacher as a model is a central assumption.

2. The teacher accomplishes his task partly by arranging certain conditions for learning. For example, he exposes his pupils to appropriate materials, and he sees to it that the social environment in the classroom is such that the efforts of a shy child are not met by unfriendly or threatening responses on the part of other pupils or of himself.

3. The teacher accomplishes his task partly by directing and appraising his pupils in certain activities. For example, both the teacher of English composition and the athletic coach require students to perform in certain ways and then conduct successive appraisals of the performance. They must be able not only to recognize errors, but also to criticize in such a way that the pupil will understand what is wrong or lacking and then will try again.

4. The teacher accomplishes his task partly by working in effective cooperation with certain adults. The modern teacher's job is not limited

to the classroom. There are times when he must work with his colleagues in conferences or committee meetings. There are times when he must contact parents or other adults in the community. There are times when he must receive instructions from, and work with, the principal or others in authority.

A third set of assumptions relates to factors which determine how successful a teacher will be. Because teaching behavior is very complex, it is not possible to specify all the ways in which good teachers differ from poor ones. But common experience and some of the findings of research do provide us with important clues.

It can be assumed that a teacher's success will be determined partly by the kind of person he is, apart from his academic proficiency and his special training. His success will in part depend upon the extent to which he manifests the traits of personality, the attitudes and beliefs that pupils commonly learn from teachers and that society considers desirable. It will in part depend upon how he is regarded by pupils, colleagues, and parents. If he is liked and respected he will be more successful than if he is held in low esteem.

A teacher's success will also be determined in part by the extent to which he himself possesses and understands the specific knowledge and skills which he is expected to teach others. It is obvious that the elementary school teacher who spells no better than his sixth grade pupils will not be able to correct their work. More important, he will have to restrict his own efforts in writing on the blackboard, for instance, to words he is sure he can spell. Thus, in trying to avoid revealing his weakness and teaching incorrect spellings, he will expose his pupils to only a limited vocabulary. A current complaint about high school courses in mathematics and science is that, because of the shortage of teachers trained in these fields, many are being taught by unqualified personnel with limited knowledge of concepts or inadequate computational skills.

A teacher's success will be determined partly by the specific teaching techniques he employs in the classroom—the ways in which he organizes materials, the kinds of activities he plans for students, his manner of speaking in terms that pupils understand, the means he uses to stimulate interest or to manage the class when the pupils are tired or unruly. Some of these techniques he should learn while in training. Others he will no doubt have to learn on the job.

To summarize these suggested assumptions, the teacher is a person who will be imitated by pupils. Therefore he should be worthy of imitation at least in those traits which pupils can observe or otherwise know about. Because he must work with people in a variety of situations, he should possess the social skills which will enable him to get on well with youngsters and adults. He will need to possess the ideas, knowledge, and skills that he would teach to others. He will need certain pedagogical skills, like the

ability to present ideas in such a manner that they will be understood, and the ability to arouse the interest of pupils.

Implications for Deriving a Rationale

The foregoing assumptions have a number of implications for the selection of teacher-trainees. In an effective teacher selection program it will be necessary to appraise both academic and non-academic traits of the candidates. A minimum level of academic competence and a minimum level of social competence are each necessary requirements. Neither by itself is sufficient. Just as a teacher is more than a subject-matter expert, so also is he more than a director of learning. However, appropriate means for a rounded and adequate appraisal of teachers or teacher candidates do not yet exist. Few, if any of the methods used at present by administrators, supervisors, or training teachers will withstand scientific scrutiny. These observations have been made so often in one form or another by serious investigators as to sound trite. And yet it appears that many of those actually selecting or making other significant decisions about individual teachers either have not heard of them or have such unshakable faith in their own judgment as not to believe them.

While a satisfactory solution to the general problem is admittedly a long way off, the application of what is already known through research would greatly improve the existing methods of selecting and evaluating teachers. For example, there are certain steps which could be taken by a school of education in order to improve the selection of its students. The first step is philosophical, to discover upon what objectives of education the members of the faculty agree, and to formulate a statement of these objectives as a basis for steps to follow.

The next step is conceptual, to construct a behavioral description of the teacher as a person to be imitated by pupils. This step is a matter of determining the areas of agreement about what behaviors are suitable for imitation by children, what behaviors are not suitable, and what behaviors are to be considered irrelevant. To be specific, all persons would probably agree that a minimum degree of skill in reading, writing, and speaking English must be required; that criminal behavior is unacceptable; and that religious activities such as church attendance—or non-attendance—are not to be considered.

The construction of a behavior description of the teacher should take into account the research findings on the sorts of teacher behaviors that are imitated by youngsters at various ages. The Anderson, Brewer, and Read *Studies of Teachers' Classroom Personalities*[1] constitute an example

[1]Harold H. Anderson, Joseph E. Brewer and Mary Frances Reed, "Studies of Teachers' Classroom Personalities, III," *Applied Psychology Monographs* No. 11, December 1946.

of the kind of study needed here. These investigators provide evidence that "integrative" teacher behavior encourages integrative pupil behavior, that "dominative" teacher behavior provokes conflicts and misunderstandings and stifles spontaneity and social development in children.

Furthermore, the behavioral description should be in line with the results of improved job analyses concentrated on the duties which teachers are actually asked to perform. But current practice, although a realistic guide, is not an ultimate criterion. Beyond checking with what teachers do, the description must be consonant with the statement of educational objectives initially drawn up.

The last problem is methodological and technical, that of converting the final body of descriptions to operational definitions. It will be necessary to specify the kind of evidence to be gathered for the purpose of evaluating the student-candidates. Only a few of the existing psychological tests will be useful to the teacher-trainee selectors. While some of the current standardized achievement tests, e.g., in reading, English mechanics, etc., can be utilized and while some sociometric devices can probably be adapted for the purpose, new appraisal techniques relevant to the desired behaviors must be invented. Present procedures such as most of the interviews now conducted, most of the self-reports now in use, most questionnaires and application forms, most letters of recommendation, as well as most personality inventories will need to be validated or discarded.

A spiral of improved teacher selection can be started by schools of education in still another way besides the reappraisal and revision of selection procedures. They can require that students of administration complete a course in tests and measurements, one specially devised for the needs of people who so soon in the future will be making exceedingly important judgments affecting the lives of large numbers of children and adults.

Admittedly the long range problem is tremendously complex. The bare beginnings that have been made are only that. But one wonders if, rather than inadequate selection procedures, the major obstacle to getting started will not be the apathy which the education profession manifests toward this problem, and the belief on the part of some people that they cannot be mistaken in their judgments.

The January, 1958, issue of *The Bulletin of the National Association of Secondary School Principals* is entitled "New Horizons in Staff Utilization." Articles are included that deal with the future staff organization of secondary schools, present studies in the area of staff utilization, and needed research and experimentation in possible better ways of utilizing the staffs of junior and senior high schools.

The Mechanics of Study Procedure

HAROLD D. CARTER

In recent years, it has been shown (1,2,3,4) that the school achievement of pupils at the high-school or college level can be predicted from scores on a self-report inventory of study methods. Substantial correlations have been found between study test scores and school achievement as measured by standardized tests, objective tests in a course, and grade-point averages.

Analysis of the study methods tests used in such investigations has shown that these inventories can be scored diagnostically (3, 6). When so scored, they provide measures of school adjustment, scholarly drives, mechanics of study procedure, and the tendency to be planful and systematic about getting school work done. In addition, a total score from the test provides a measure of the general excellence of the study methods reported by the pupil.

Evidence from these studies (3,6,7) has consistently indicated that the attitude measures provided by the study inventories are better predictors of school achievement than are the scores concerned with the procedures used in study. The quantitative results are presented in Table I. This finding has been somewhat disconcerting, since instruction in effective study methods seems naturally to start with basic procedures, or mechanics of study. It would seem to be more difficult to change basic attitudes toward school than to change the procedures used in doing school work.

The question has arisen whether the prediction of school achievement on the basis of mechanics of study might not be improved through a more resourceful investigation. The present research has been designed to shed some light upon this problem. Are the mechanical procedures used in study necessarily insignificant as determiners of achievement?

Method and Data

The method, in general, has been to throw more energy into the construction of a test designed to measure mechanics of study procedure. Instead of measuring this aspect of study by means of thirty items in a test,

Dr. Harold D. Carter is Professor of Education at the University of California at Berkeley and a member of the California Advisory Council on Educational Research. *The research reported here has been facilitated by the use of funds from the Research Budget of the Department of Education, University of California, Berkeley, California.*

along with 120 items designed to measure other things, it was decided to devote the entire inventory to measurement of this one factor. Accordingly, a self-report inventory of 150 items was constructed, with the attempt made to have each of the items deal with some facet of study procedure. This inventory was called the California Mechanics of Study Test. It contained thirty items which had been previously validated, and 120 new items. The scoring scheme already available for the thirty old items enabled quick scoring of the tests to provide reports to the cooperating schools. The 120 new items were to be investigated.

TABLE I

Correlations Between Study Methods Test Scores, IQ's, and Grade-Point Averages for a Group of 174 Ninth-Grade Students. 1956 Data (Earlier Findings)

Study Test Scores	*r with IQ*	*r with G.P.A.*
Factor I. Self-confidence, morale, and personal adjustment	.35	.54
Factor II. Scholarly drives and values	.26	.38
Factor III. Mechanics of study procedure	.06	.09
Factor IV. Planning, system, and effective use of time	.24	.26
Factor V. Self-confidence, morale, and personal adjustment	.30	.49
Total Study Test Score	.30	.50

Note: The correlation of grade point average with IQ is .51.
Partial Correlation, between achievement and study test scores, holding IQ constant, is .43.
Partial correlation, between IQ and achievement holding study test score, constant is .44.
Multiple correlation of achievement with combined IQ and study test score is .63.

Intelligence and achievement data were collected from the schools in which the pupils were tested. These data were used, along with the results of the inventory, in order to construct new scoring keys. About one thousand pupils in three schools were used in the first phase of the research. The records from all tests were complete for about 800 of the pupils, all of whom were in grade ten. Scoring weights for the items were secured by contrasting the responses of high-achieving and of low-achieving pupils. Item-responses were tallied for 200 high-achievers, and for 200 low-achievers; in each of these groups there were 100 boys and 100 girls.

The first key contained 109 items from the inventory of 150 items. These items discriminated significantly between pupils with superior grade-point averages and pupils with the lowest grade-point averages. The items

with the heaviest scoring weights were selected to form two new scoring scales of thirty items each.

The proportions of responses in *Yes* and *No* categories were secured from high- and low-achieving groups. The standard errors of such proportions were determined, and the scoring weight for each item was the difference between frequencies for the two criterion groups, divided by the standard error of that difference. The best sixty items were selected by taking the sixty items with heaviest scoring weights. These items were divided into two groups of thirty each, taking care that each such scale would have an equally good selection of items.

In order to test the effectiveness of the scales so constructed, the test was administered to a new group of tenth-grade pupils. More than 1000 tenth-graders in three more high schools were tested. Intelligence test results and records of high-school achievement were collected for these new groups of pupils.

Results

Using the same inventory. A sample of the data was selected by sorting the answer sheets into four piles, taking every fourth paper for inclusion in the sample. This was done in order to save time in analysis of the data. Correlations could then be computed on the basis of a sample of moderate size. The work of repeatedly scoring tests with different scoring keys was also proportionately reduced.

The results are presented in Table II. Test papers for 268 students in grade ten were scored using the two new keys. Each key included the

TABLE II

Correlations Between New Factor III Scores and Grade-Point Averages for 268 Grade 10 Students—Cross-Validation Data (New Data)

Study Test Scores	*r with G.P.A.*
New Factor III Score, first scale	.41
New Alternative Factor III Score	.47

responses to thirty items in the test. Grade-point averages for the 268 students were computed from transcripts of records. The results are shown in Table II. Here we see that the correlations between grade-point average and the two keys are .41 and .47 respectively. This indicates that a self-

report inventory, scored to measure skill in the mechanics of study procedure, does correlate significantly with school achievement.

Results from a revised test. A new form of the study methods test was then constructed, replacing sixty of the old items with the sixty items from the new scales for measuring mechanics of study procedure. This new study methods test was administered to large groups of high-school students, and scored in the customary manner. IQ's were obtained from the school records, and grade-point averages were computed from transcripts of high-school records. Correlations of the study test scores with measures of intelligence and achievement were computed. The results are summarized in Table III.

TABLE III

Correlations Between New Study Methods Test Scores, IQ's, and Grade-Point Averages, for 174 Students in Grade 10—Cross Validation. 1957 Data (New Data)

Study Test Scores:	*r with IQ*	*r with G.P.A.*
Factor I. Morale	.35	.49
Factor II. Scholarly values	.25	.44
Factor III. Mechanics of study	.45	.53
Factor IV. Planning and system	.17	.35
Factor V. Mechanics of study (second scale)	.32	.47
Total study Test Score	.36	.55

Note: Correlation of grade point average with IQ is .57.

Partial r, between achievement and study test total score, holding IQ constant is .44.
Partial r, between IQ and achievement, holding study test total score constant is .47.
Multiple correlation of achievement with combined IQ and study test total score is .68.

Although the tests were administered in all grades from seven through twelve inclusive, the analysis of data has not been completed. Results presented here are limited to a sample of 174 pupils in grade ten in one high school. These data, along with those in Table II, are conclusive. They show that the new measure of mechanics of study procedure is effective for prediction of school achievement.

Implications of the Study

Earlier studies had indicated that the measure of mechanics of study procedure had negligible correlation with school achievement, while equal

numbers of items dealing with attitudes yielded correlations of .50 to .54 with measures of school achievement. These earlier findings tend to lead to the generalization that the mechanics of study procedure are among the less important determiners of achievement.

The new data presented here indicate that this easy generalization is false. It appears that a better measure of mechanics of study procedure predicts achievement as well as do the measures of morale and scholarly drive. The data suggest a new generalization, namely: although attitudes toward school are more easily measured, the more elusive evidence concerning actual procedures used in study, when carefully assessed, does enable prediction of school achievement.

In general, the new and revised study methods test is slightly more effective than the old one. The total score from the new test correlates .55 with grade-point average (see Table III), while the total score from the earlier test correlated .50 with grade-point average (see Table I). The partial and multiple correlation analysis, as shown in the two tables, also indicates improvement of the revised test as compared with the earlier form. The improvement may be attribued primarily to the energy expended in revising the measures of mechanics of study procedure.

This finding would seem to be important from a practical standpoint, since in trying to instruct pupils in effective study methods teachers naturally seem to wish to deal with the tangible problems pertaining to procedures in study.

Summary, Conclusions, and Suggestions

Since research with study methods tests seemed to indicate that the mechanics of study procedure are not useful for prediction of school achievement, a research was designed to test this generalization.

A self-report inventory of 150 items was constructed, with all items pertaining to the mechanics of study procedure. This test, called the California Mechanics of Study Test, was administered to about 1000 high-school sophomores. Contrasting responses of 200 high-achievers, and of 200 low-achievers, it appeared that 109 of the items would be useful in predicting achievement. The sixty best items were selected, and dealt with as two comparable groups of thirty items, in order to make two short, equivalent measures.

The Mechanics of Study Test was then administered to another group of about 1000 tenth-grade students. When scored with the two new scoring keys, correlations with grade-point averages of .41 and of .47 were obtained, using data from a representative group of 268 high-school sophomores.

The two selected groups of thirty items each were then incorporated with ninety other items in a revised form of a diagnostic study methods

test. Evidence from testing a new group of 174 high-school sophomores indicated that the revised test is useful for prediction of high-school achievement. Not only is the new test better than the older test, but the measures of mechanics of study procedure yield correlations of .53 and of .47 with grade-point averages.

The evidence indicates that the mechanics of study procedure, as assessed from responses in a self-report inventory, are important determiners of school achievement. This finding suggests a needed re-interpretation of the results from other studies. The essential aspects of study procedure are not unrelated to achievement. One may conclude that proper assessment of mechanics of study is merely more difficult to accomplish than the measurement of attitudes affecting study. The earlier research would suggest that effort expended in the attempt to improve study technique should be largely limited to work on attitudes and values. These newer findings support the teachers who wish to deal also with the more tangible aspects of study, namely the actual procedures employed in doing the school work.

REFERENCES

1. Carter, Harold D. "Methods of learning as factors in the prediction of school success," *The Journal of Psychology*, 1948, 26, 249-258.
2. —— "Correlations between intelligence tests, study methods tests, and marks in a college course," *The Journal of Psychology*, 1950, 333-340.
3. —— "What are some of the basic problems in analysis of study techniques?" *California Journal of Educational Research*, Sept. 1951, Vol. II, No. 4, 170-174.
4. —— "Cross validation of a study methods test," *California Journal of Educational Research, Jan.* 1953, Vol. IV, No. 1, 32-36.
5. —— *California Study Methods Survey.* Los Angeles, California: California Test Bureau, 1957.
6. —— "Development of a diagnostic scoring scheme for a study methods test," *California Journal of Educational Research*, Jan. 1955, Vol. IV, No. 1, 26-32.
7. —— "Some validity coefficients for study test scores," *California Journal of Educational Research, Nov.* 1956, Vol. VII, No. 5, 212-216.

Hugh Bell, professor of psychology at Chico State College and a member of the California Advisory Council on Educational Research, has been named by Governor Knight to serve on a seven-member committee to license psychologists. The committee was created by a new licensing law passed during the last legislative session. The committee will function under the Board of Medical Examiners in reviewing credentials of psychologists.

Mark your calendar

for the

JOINT CONVENTION

of the

California Educational Research Association and the
American Educational Research Association

Friday evening, March 7, and Saturday, March 8

St. Francis Hotel, San Francisco

Friday evening—General Session on evaluating group research

Saturday morning—four sections, individual reports of research

Saturday noon—luncheon, St. Francis Hotel.
Address by an outstanding speaker

Saturday afternoon—General Session, Symposium on
Educational Research and the Curriculum

Make your reservation now for the Saturday luncheon
with Floyd I. Marchus, Secretary CERA
Office of the County Superintendent
Martinez, California

The Arithmetic Achievement of Pupils Differing in School Experience

GILBERT SAX and JOHN R. OTTINA

This experimental investigation was undertaken to study the effects of dissimilar curricula on arithmetic computation and understanding. One curriculum has been associated with the "progressive" movement in education. The second curricula has been referred to as "conventionally" oriented. The proponents of the "progressive" program, among other recommendations, have argued that to delay the formal study of arithmetic gives the child a chance to develop a "need" for the use of numbers. They further contend that, prior to that time, the child would be forced to study material which he could not fully comprehend, use, or enjoy.

The opponents of the "progressives'" program have argued that to delay the teaching of formal arithmetic until the child develops a "need" for the use of numbers is (1) overly time consuming, (2) fails to recognize that needs can be learned prior to their spontaneous appearance, and (3) may actually inhibit such factors as curiosity, the development of good work habits, etc.

Review of the Literature

Certainly it would be difficult to justify a position which omitted the importance of drill in learning. However, drill, without the benefit of previously developed understandings, is more time consuming, as far as the learning process is concerned, than drill with understanding. Spitzer (2) notes that

> . . . practice or drill on fundamental phases of arithmetic is essential if the needs of children are to be met. The saving of time and energy, to say nothing of the confidence generated, which automatic mastery of essential arithmetic affords is sufficient vertification of this principle.

However, the same investigator notes that, ". . . to be effective, drill should follow understanding. The detrimental effects of premature drill support this statement."

Gilbert Sax is a graduate student currently in the doctoral program of the School of Education at the University of Southern California. He is also working in the Veterans' Guidance Center of that institution. His professional experience includes work as a high school teacher, as an adult education instructor in psychology, and as a teaching assistant at the University of California at Los Angeles.

John R. Ottina is an adult education teacher of mathematics for the Los Angeles City Schools. He has been a teacher in Los Angeles secondary schools for several years. Prior to becoming a teacher he was a mathematician for Lockheed Aircraft Corporation.

The present article is based upon the authors' master's theses which were completed at the University of California at Los Angeles.

In 1939, Mary E. Herschberger undertook the problem of evaluating junior high school pupils who had attended the University Elementary School, a "progressive" school under the auspices of the UCLA teacher training and experimental education program (1). She concluded that ". . . the difference between the University Elementary School group and the control group is highly reliable [in favor of the former]." However, the reported Critical Ratio of 1.31 which was found to exist between the two groups tested on the arithmetic sub-test of the Stanford Achievement Test is not significant at the .05 level. The reported difference, then, is not statistically significant, and one must conclude that chance may account for the discrepancy between the achievement of the two groups.

Schools and Subjects Employed in This Study

The University Elementary School was chosen to represent the population of "progressive" elementary schools. Other schools in nearby communities having a population of youngsters of like backgrounds were chosen to act as control schools. Specifically, the two types of curricula involved in this study differ in a number of ways. The following is a summary of the differences:

Experimental School	*Control Schools*
1) Postponement of formal arithmetic to the fifth grade.	**1) Specific development of skills in arithmetic from the first grade on.**
2) Emphasis on active pupil participation in determination of methods and goals.	**2) Vicarious learnings paramount with pupils having little choice in determination of methods and goals.**
3) Arithmetic is taught in relation to other subjects, especially the social studies.	**3) Arithmetic is taught primarily as a separate subject with examples chosen from other study areas.**

Many excellent suggestions for test items that require mediation can be found in the literature (3), but to date none has been written to form a test suitable for elementary and junior high school children. After editing, rewriting, and adding new types of items to the suggestions found in the literature, two preliminary tests were developed and given to pupils of similar abilities and backgrounds as those employed in the experimental and control groups in this study. On the basis of the item analysis, sixty items were chosen which met the criteria and the statistical requirements of difficulty and discriminating ability for the elementary school sample. Sixty-three such items were found suitable for the junior high school groups.

A reliability of .89 was determined for the total of the four elementary grades tested using the Kuder-Richardson formula. Although 159 pupils were tested with the final sixty item examination, it was impossible to

include all of those pupils in the experimental and control groups. When the reliabilities were computed grade by grade, the correlations dropped because of the greater restrictions in sample size. The reliabilities ranged from .81 at the third grade level to .86 at the sixth grade level.

At the junior high school level, a Kuder-Richardson reliability coefficient of .84 was determined with 171 first semester seventh graders. No corrections were applied at either the elementary or junior high levels.

The arithmetic fundamentals subsection of the California Achievement Test (Elementary and Intermediate) was used to measure computational skills.

It should be noted there is a distinct difference between the two programs with regard to the time of initiating formal drill in arithmetic. Other variables, such as pupil participation in determination of methods and goals and the degree to which the subjects are correlated are difficult to assess. However, an examination of a number of courses of study and from informal visits to each of the schools seems to substantiate the differences noted above.

Ninety-seven subjects were chosen to represent the experimental group, forty-three of whom were in the third, fourth, fifth, and sixth grades at the University Elementary School. The remaining fifty-four, who were UES graduates, attended the seventh and eighth grades of a nearby junior high school. Pupils attending UES were matched with pupils at the control schools on the basis of IQ ($M = 115$), chronological age ($M = 124.63$ months), sex (23 males and 20 females), grade, and socio-economic level. At the junior high school level, UES graduates were matched with graduates from conventional elementary schools on the basis of IQ ($M = 113.83$), chronological age ($M = 153.50$ months), sex (27 males and 27 females), grade, and socio-economic level. At the junior high school level it was possible to match pupils on the basis of instructor and mathematics class period.

The Testing Instruments

One criticism that the "progressive" in education has made against earlier studies has been the rote material contained on the testing instruments. In order to overcome this objection, a test was devised that would measure arithmetic meanings independently of computational skills. An item has meaning for a child if he responds in part in the manner in which he responded to problems of a similar nature previously and, secondly, if he is forced to "think through" the problem, going through a series of minor steps before arriving at the correct response.

Results

Student's *t*'s were employed to discover whether or not the null

hypothesis could be refuted when arithmetic meanings scores were use as the dependent variable. Table I summarizes the results.

TABLE I

Student's t's Employing Arithmetic Meanings as a Dependent Variable

Grades	*Mean Difference (Experimental minus Control)*	*N*	*t*	
3 and 4	1.14	21	.526	not significant
5 and 6	4.32	22	1.907	not significant
7 and 8	5.89	54	4.56	significant .005 level

Only at the seventh and eighth grade levels could the null hypothesis be rejected. Table II summarizes the results of Student's *t's* when arithmetic computation is the dependent variable.

TABLE II

Student's t's Employing Arithmetic Computation as a Dependent Variable

Grades	*Mean Difference (Experimental minus Control)*	*N*	*t*	
3 and 4	–6.72	18	2.45	Significant .05
5 and 6	–1.21	19	.34	Not Significant
7	4.87	16	1.57	Not Significant

Although the control schools made significantly higher computational scores at the end of the third and fourth grade levels (before the experimental school began its formal arithmetic program), the differences were reduced to chance at the fifth, sixth, and seventh grades.

Implications Regarding the Teaching of Arithmetic

Although only tentative results and conclusions can be drawn from this study, the evidence seems to indicate that training in computational skills prior to the fifth grade yields no greater results in terms of accomplishment than does postponing formal drill until the fifth grade.

Although meaning scores were not significant at the elementary school level, the differences between the experimental and control schools were highly significant at the junior high school level in favor of the former. This difference might be attributed to the increasing structure in the manner in which arithmetic is presented. Perhaps later investigators will find that postponement of early drill followed by increased rigor of training will yield maximal results.

Summary

Tests of arithmetic meanings and fundamentals were given at the end of the third, fourth, fifth, sixth, and seventh grades to pupils from "progressive" and "conventional" schools. At the eighth grade, only a test of arithmetic meanings was given. Pupils were matched on the basis of IQ, CA, grade, sex, and socio-economic level in order to study the effects of a delayed formal arithmetic program at the "progressive" school. Significant differences were found between the two groups on a special non-computational test of arithmetic meanings at the seventh and eighth grades only. It was also found that third and fourth grade pupils from "conventional" schools made a significantly higher score on a standardized computation test of arithmetic than did the corresponding "progressive" group. This difference was reduced to chance at the fifth, sixth, and seventh grades.

REFERENCES

1. Herschberger, M. E. *A Follow-up Study of Junior High Adjustment of Pupils Graduated from University Elementary School of the University of California at Los Angeles.* Unpublished Master's Thesis, University of Southern California, 1939. 78 pp.

2. Spitzer, H. F. "Learning and Teaching Arithmetic." In *The Teaching of Arithmetic,* Fiftieth Yearbook of the National Society for the Study of Education, Part II, pp. 120-142. Chicago: The University of Chicago Press, 1951.

3. Sueltz, B. A. and Boynton, H. and Sauble, I. "The Measurement of Understanding in Elementary-School Mathematics." In *The Measurement of Understanding,* The Forty-Fifth Yearbook of the National Society for the Study of Education, Part I, pp. 138-155. Chicago: The University of Chicago Press, 1946.

The American Personnel and Guidance Association will hold its annual convention during the week of March 31 to April 3, 1958, with headquarters in the Sheraton-Jefferson Hotel, St. Louis, Mo. For information concerning registration, write: Miss Marie Bergmann, 5040 Grace Ave., St. Louis 16, Mo.

Neighborhood Social Characteristics And Elementary Schools in Richmond

MYRON SCHUSSMAN

Measuring Social Status

Shevky and Bell have developed a new method of describing economic, urban and ethnic status in any American community, based on United States Census information (1). In using this method, three numerical indices are derived which make it possible to compare one community or neighborhood with another. The basic geographic unit is the census tract, an area which is approximately equal to an elementary school attendance area in many cities. Since the variables used are taken directly from published census information, this technique can be applied to any community for which census tract data are available.

The variables used are:

Economic status:	
occupation	(proportion of craftsmen, operatives, and laborers)
education	(proportion of persons with 8 yrs. of school or less)
Urban status:	
fertility	(no. of children under 5 per 1,000 women age 15-44)
women working	(proportion of women in labor force to total women)
dwellings	(proportion of single-family dwelling units)
Ethnic status:	
segregation	(proportion of Negro and foreign-born white persons from Mexico, southern and eastern Europe, and Asia)

"Higher" economic status is associated with higher occupational and educational level; "higher" urban status is indicated by smaller families, more women working, and more multi-family dwellings; and "higher" ethnic

---

Myron Schussman is Assistant Superintendent of Schools (for Instruction) in Santa Clara County, California. He received the Ed. D. degree in January 1956 from Stanford University. His previous experience includes five years of classroom teaching and ten years of supervision and administration, all in California. This article represents extracts from his doctoral dissertation.

status is derived from a larger proportion of colored and foreign-born white persons from Mexico, southern and eastern Europe, and Asia. "Higher" refers only to the numerical size of the index, and has nothing to do with any value or rating.

The Analysis Applied to Richmond Schools

In 1950, the Richmond, California, School District provided an appropriate community for application of this method of social area analysis in studying school problems. The elementary school attendance areas made up 19 neighborhoods, closely related to census tract boundaries, showing a wide spread of social composition. Within this area there were 118,785 persons, of which 17,572 were pupils enrolled in grades Kindergarten through six.

Table I shows the range, mean and distribution of the Shevky and Bell indices for the Richmond elementary school neighborhoods, with ranges for the entire San Francisco Bay Region added for comparison.

TABLE I

Social Status Indices for Richmond Elementary School Attendance Areas and San Francisco Bay Region Census Tracts, 1950

	Economic Status	*Urban Status*	*Ethnic Status*
Richmond elementary school attendance areas (N = 19):			
Range	39 to 81	20 to 50	4 to 48
Mean	56	28	17
Standard deviation	10	7	10
S.D. of the Mean	2	1	2
San Francisco Bay Region census tracts (N = 244:			
Range	22 to 103	13 to 104	3 to 99

Social Status and School Effectiveness

Relationships between the social indices and elementary school effectiveness were studied by analyzing the following aspects of school life: parent-school relations, teacher attitudes, pupil physical factors, emotional factors, intelligence, communicative ability, and achievement. School records were gathered and tabulated and some form of average or mean score was obtained for each of the Richmond elementary schools on each of the above variables. The Pearson product-moment formula was applied to obtain

TABLE II

Educational Variables from Richmond Elementary Schools Correlated with Shevky and Bell Social Status Indices of School Attendance Areas
(N = 18 to 23 schools)

Educational Variable	*Product-moment coefficient of correlation between educational variable and social index*		
	Economic Status	*Urban Status*	*Ethnic Status*
Parent-school relations			
Per cent of parents attending conferences, 1953-1955 (M = 88.1, s.d. = 6.4)	+.67**	−.37	−.67**
Per cent of pupil days absent due to illness, 6-yr. av. (M = 6.4, s.d. = 1.3)	+.70**	−.51*	−.41
Per cent of pupil days attendance, 6-yr. average (M = 90.1, s.d. = 1.3)	+.01	−.05	−.27
Per cent of pupil days not enrolled, 6-yr. average (M = 2.2, s.d. = 1.0)	−.45*	+.49*	+.17
Per cent of pupil days absent not due to illness, 6-yr. average (M = 1.3, s.d. = 0.6)	−.63**	+.36	+.53*
Teacher attitudes			
Teacher days absent due to illness, 1949-1950 (M = 4.5, s.d. = 1.8)	−.05	+.06	+.06
Pupil physical factors			
Hearing defects, 20 db. loss, 1954 (M = 1.1, s.d. = 0.5)	−.28	+.27	+.04
Pupil emotional factors			
Guidance referrals, "behavior," 5-yr. average (M = 57.4, s.d. = 21.9)	+.49*	−.24	−.59**
Referrals to school psychiatrist (M = 4.5, s.d. = 3.7)	−.49*	+.32	+.56**
Pupil intelligence, communicative ability, achievement			
I.Q., Kuhlmann-Anderson, grade five (M = 96.1, s.d. = 6.1)	+.88**	−.76**	−.77**
Reading achievement, Stanford, grade 3 (M = 7.5 yrs., s.d. = 0.4)	+.77**	−.48*	−.59**
Reading achievement, Stanford, grade 5 (M = 9.4 yrs., s.d. = 0.7)	+.74**	−.64**	−.60**
Reading readiness, Gates, grade one (M = 55.8, s.d. = 11.8)	+.75**	−.66**	−.60**
Arithmetic computation, Stanford, grade 6 (M = 5.5, s.d. = 0.3)	+.50*	−.31	−.31
Arithmetic reasoning, Stanford, grade 6 (M = 5.5, s.d. = 0.5)	+.61**	−.35	−.45

*$p < .05$ **$p < .01$

single correlations (r) between each of the social indices and each of the educational factors. Some of the obtained correlations are shown in Table II.

Conclusions

The Shevky and Bell typology is an effective method of analyzing the social characteristics of school neighborhoods. Significant correlations are found between social area indices and school-related behaviors of parents and children. The highest degree of correlation is found between social status and communication performance (including "verbal" intelligence, reading readiness, reading achievement, and arithmetic achievement). Since the same relationships hold in all the grades, it is evident that children from different neighborhoods begin school with widely differing language abilities and maintain these wide differences throughout the elementary school years. The child who comes from an environment in which he learns concepts, ways of thinking, vocabulary, and modes of expression different from those used in school faces a tremendous handicap.

Parent attitudes toward school show high correlations with social status. Parents who show a "less favorable" attitude toward education are those in areas of lower economic status or in areas more highly urbanized or segregated. The methods of social control and enculturation which a child experiences in his neighborhood are reflected in his school life. Minor "discipline" or behavior problems are more prevalent in areas of higher socio-economic status; serious psychiatric referrals are more frequent in areas of greater segregation.

Teacher attitudes as indicated by this study are generally impartial to all levels of social and economic status. Data regarding referrals for behavior suggest that teachers are considerate of children from areas of low economic status or high ethnic status. There does not seem to be support herein for the theory of inevitable misunderstanding and conflict between the "middle-class" teacher and the "lower-class" pupil.

General physical health and defects of speech or hearing are not significantly related to social status. This finding throws further emphasis on the heavy discriminative loading of the school curriculum. Elementary school children, who vary so widely in academic achievement, do not show the same patterns of variation in physical attributes despite probable differences in nutrition, medical care, etc., at different economic, urban, and ethnic levels.

REFERENCE

1. Shevky, Eshref, and Bell, Wendell. *Social Area Analysis: Theory, Illustrative Application and Computational Procedures.* Stanford, California: Stanford University Press, 1955.

Critical Requirements for Teaching Secondary School Physical Education

LANE BURTON BLANK

It was the purpose of this study to identify and classify incidents judged to be characteristic of the effective direction of learning in secondary school physical education. The study proceeded on the assumptions that: (1) teaching in physical education is a function of the overt behavior of the instructor; (2) some overt behaviors may be critical to the teaching process; (3) such critical behaviors may be categorized and classified; and (4) reports of critical incidents provided by members of groups able to observe physical education teaching may be analyzed to designate such behavior.

The following hypotheses were adopted for the purposes of the current study: (1) that critical behaviors characterizing generally effective physical education instruction are qualitatively distinguishable; and (2) that reports of critical behaviors of physical education instruction do not differ significantly among various groups of observers.

The present investigation has been delimited in the following respects:

1. Research has been confined to the identification of observable behavioral incidents.

2. Only critical incidents judged to be *effective* by observers are treated herein.

The following terms, pertinent to the study, are defined for the clarification of the succeeding discussion:

1. *Critical behaviors* are those which have been found to make the difference between success and failure in carrying out an important part of a specific assignment (1).

***Lane Burton Blank** is an instructor and athletic trainer at Sacramento State College. He has been assistant athletic trainer at the University of California at Los Angeles, and a teacher in Long Beach and Culver City Unified School Districts. This article is a digest of his doctoral dissertation which was done in 1957 at UCLA.*

2. A *critical incident* is one that occurs "in a situation where the purpose or intent of the act seems farly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects" (2).

Procedure

The method known as the critical incident technique, developed by John C. Flanagan and others at the American Institute for Research, has been employed in the current study. Several samples of pupils and educators were asked to describe specific incidents which illustrate particularly effective behavior on the part of physical education instructors recently observed. Forty-nine educators, including physical education teachers, principals, supervisors, and coordinators of college student teaching activities in physical education, and 1,619 junior and senior high school pupils participated as observers in this study. They represented three school districts and a teacher preparation institution in Los Angeles County.

The data were collected by means of a booklet in which three questions were asked each respondent with regard to his report on an instance. The first asked for the setting: time, place, and whether or not the reporter himself were involved. The second was concerned with the action itself. ("What did the teacher DO?") The final item requested the respondent to state WHY the instructor's action was a good one. Brief letters of introduction to the student and to the educator respectively were included in the booklet.

Because of the possibility of group differences among districts, it was decided to treat the three samples or replications of pupil reports separately.

The behaviors contained in the reported critical incidents were classified according to content. Similar behaviors were grouped first into categories of behavior, and these, in turn, into classes, sub-areas, and major areas representing four levels of generalization. Each step involved building from the specific to the more general. The behaviors reported by the members of the various samples were classified independently in order to prevent the investigator from attempting to force data which might be different into a pre-determined plan conceived from any other set of data.

Following derivation of the classes, the individual behaviors reported were tallied. The reports of the three major student samples were analyzed for the possible significance of their differences at the second, or *sub-area*, level in order to test the second hypothesis employed in the study. Since there were no apparent significant differences, the student consensus sample was formed, involving the combination of pupil reports from all three districts into a single large sample. This consensus of reports was studied and compared with the data furnished by the educator sample.

Results

The results of this critical incident study are summarized as follows:

1. The majority of reports (58.14 per cent) concerned the observer's own instructor rather than another instructor, while more than two-thirds of the reported behaviors involved the observer himself or his class.

2. The basic outline of critical requirements for secondary physical education teaching, stated in terms of effective teacher behavior and determined from the student consensus, consisted of fourteen behavior sub-areas, as follows:

I. Administrative behaviors.
   - A. Administered and organized program adequately.
   - B. Handled equipment and supplies efficiently.

II. Instructional behaviors.
   - A. Provided effective instruction in physical education skills and activities.
   - B. Offered capable instruction and activity in healthful living.
   - C. Participated properly in the instructional program.
   - D. Evaluate the learning situation fairly.
   - E. Participated optimally in extra-instructional activity.

III. Social behaviors.
   - A. Created a free or democratic atmosphere.
   - B. Provided guidance and maintained control of pupils.
   - C. Evidenced satisfactory personal-social relations.
   - D. Oriented new pupils effectively.
   - E. Made effective use of parent contact.

IV. Personal behaviors.
   - A. Evidenced and applied knowledge of pupils and subject matter.
   - B. Displayed satisfactory personal characteristics.[1]

3. The most frequently reported *classes* of behavior in the student sample were (a) "demonstrated, and corrected, effectively skills and use of equipment, and used repetition in practice"; (b) "conducted individual and/or small group instruction in skills"; and (c) "counseled individual pupils in difficulty."

4. The outline of critical requirements as determined from the educator reports numbered eight effective sub-areas.

[1] A more detailed outline of critical requirements, stated at the "class" level of behavior, is found in the original dissertation.

5. The greatest numbers of educator-reported incidents concerned (a) "demonstrated and corrected in teaching skills"; (b) "organized squads and delegated responsibility to leaders"; and (c) "explained well with repetition."

6. Differences in the percentage of reports (at the sub-area level) between the pupil and educator samples ranged from 0.30 to 16.16 and critical ratios from 0.84 to 10.00. Eight of these critical ratios, to be found in Table I, appear to bear statistical significance. Three of the eight, which

TABLE I

Percentages, Differences Between Percentages, Standard Errors of the Differences, and Critical Ratios Relating to a Comparison of the Effective Behaviors Reported in the Student Consensus and Educator Samples

Sub-area	*Student consensus per cent*	*Educator per cent*	*Difference between per cents*	*Standard error of difference*	*Critical ratio*
I A	6.72	21.74	15.02	5.01	3.00
I B	2.26	4.35	2.09	2.49	0.84
II A	21.52	37.68	16.16	5.94	2.72
II B	8.68	4.35	4.33	2.57	1.62
II C	6.57	11.59	4.92	3.92	1.26
II D	7.92	11.59	3.67	3.92	0.94
II E	7.40		7.40	0.74	10.00
III A	3.32		3.32	0.49	6.78
III B	18.87	4.35	14.52	2.68	5.43
III C	7.26	4.35	2.91	2.56	1.13
III D	0.38		0.38	0.17	2.24
III E	0.30		0.30	0.15	2.00
IV A	2.34		2.34	0.41	5.64
IV B	6.49		6.49	0.68	9.61

were mentioned by both students and educators, represent behaviors relating to administration and organization of the program (IA), instruction in activities (IIA), and control and guidance of pupils (IIIB).

Conclusions

The principal conclusions derived from the present study are as follows:

1. From the data gathered in this study and with special attention to those behaviors most frequently reported, it may be surmised that, according to students, the effective physical educator should provide capable instruction in activities and maintain good control of pupils. *(Continued on page 32)*

Attitudes of Fraternity And Non-Fraternity Student Groups On Issues Related to University Life

JOHN T. PALMER

The influence of attitudes upon thought, memory, and learning has been recognized since the work of Ach and other German investigators of the late nineteenth century. It now appears that attitudes determine not only the conclusions which are derived from facts but also the very facts which are accepted. The social psychologist, the sociologist, and the professional educator have emphasized within recent years the importance of attitudes in relation to both individual and group behavior. In relation to this emphasis, the development of desirable attitudes has been proclaimed as one of the important goals of modern education. This emphasis has also been reflected in the development of instruments for measuring and assessing attitudes.

Purpose

This investigation compared the attitudes of fraternity and non-fraternity student groups at the University of Southern California on twenty-two selected issues. Attitudes of both groups of students, including the four class levels within each group, were elicited on each of the issues. The primary purpose of the study was to ascertain whether there existed significant differences in attitudes which might be concomitant or associated with group affiliation. The study also attempted to isolate some of the attitudinal differences which may have existed at the time of affiliating with a group. A secondary but important purpose of the study was to determine when the attitudinal differences, if any, first occurred.

The hypotheses investigated were: (1) There exist no significant differences of attitudes among the non-affiliated class groups toward the twenty-two selected issues related to university life. (2) There exist no significant

---

John T. Palmer is Coordinator of Advisement and Associate Professor of Education at San Francisco State College. Prior to the current year, he served as Director and Head Counselor of the Veterans Guidance Center, University of Southern California, and as a part-time staff member of the Los Angeles State College. He formerly served as Dean of Men and Director of Student Activities at Mississippi Southern College, Hattiesburg, Mississippi. The present article is a digest of his doctoral dissertation. He obtained his Ph.D. at the University of Southern California in June, 1957.

differences of attitudes among the affiliated class groups toward the selected issues. (3) There exist no significant differences of attitudes in the affiliated class groups and the respective non-affiliated class groups toward the selected issues. (4) Significant differences of attitudes between the affiliated and non-affiliated freshman groups are no fewer than between the affiliated and non-affiliated senior groups toward the selected issues. (5) Significant differences of attitudes between the affiliated freshman and the affiliated senior groups are no fewer than between the non-affiliated freshman and the non-affiliated senior groups toward the issues.

Method and Procedure. In accomplishing the objectives of the investigation, the method of successive intervals was employed with a five interval scale. This measurement technique was used with two groups of students, one of 258 fraternity members from six of the thirty-two national social groups represented on the campus, and another group of 247 non-fraternity students residing in the two housing units for male students. For the purpose of collecting data, twenty-two attitude scales were constructed on the following issues: (1) hazing, (2) the honor system, (3) the practice of paying amateur athletes for their service, (4) the effect of the university upon character development, (5) allowing a science to be taught which conflicts with religious beliefs, (6) pre-marital sex relations, (7) control by the students of a group's activities and policies, (8) the university's contribution to modern living, (9) the practice of allowing college professors to state their own ideas in the classroom on controversial subjects, (10) required class attendance at the university level, (11) the practice of censoring a student publication, (12) allowing secret organizations within our culture, (13) the employment of a dormitory or house mother, (14) sex education as a part of the college curriculum, (15) racial integration in college life, (16) the effect of engaging in student politics upon character development, (17) the university administrative officers' concern with the students' welfare, (18) the end of obtaining good grades justifying the means, (19) the effect of group living upon character development, (20) the use of alcoholic beverages, (21) the importance of securing good grades in college, and (22) the importance of paying attention to the attitudes held by one's friends before making up one's mind on an issue.

Attitudes scales were constructed so that the subjects were able to respond in any one of five different ways. The range of responses ranged from absolute agreement or acceptance to absolute disagreement or rejection. The subjects were instructed to read each statement and to indicate their attitudes by checking the expression which reflected their feelings toward the issue. The results were summarized by totaling the number of responses of both groups of students. An objective analysis of the data using the chi square formula was made to determine whether there existed significant differences of attitudes at either the five or one per cent level of confidence among the various groups and sub-groups of both samples.

Both intra-group and inter-group comparisons were made of the four class groups: freshman, sophomore, junior, and senior. Three hundred and fifty-four chi square computations were necessary to test the hypotheses of the investigation.

Findings

The hypothesis that there exist no significant differences of attitudes among the non-affiliated class groups toward the issues was untenable. Differences in the attitudes of the four classes of the non-affiliated sample were found on fifteen of the issues studied. The freshman and sophomore classes differed on two issues, the freshman and junior classes on four issues, and the freshman and senior classes differed on thirteen of the twenty-two issues. The sophomore and junior classes differed on six issues, the sophomore and senior classes on five issues, and the junior and senior classes differed on six issues. While significant differences of attitudes were found at all class levels, it would appear that the change began slowly and evolved over a period of three years.

The second hypothesis that there exist no significant differences of attitudes among the affiliated class groups toward the selected issues was also untenable. The freshman and sophomore classes of the affiliated sample differed on one issue, the freshman and junior classes on three issues, and the freshman and senior classes on seven issues. No significant differences of attitudes were found when comparing the responses of the sophomore and junior classes, the sophomore and senior classes, or the junior or senior classes of the affiliated sample. Fewer differences of attitudes were found among the affiliated sample than among the non-affiliated sample. Little change of attitudes was found to occur during the first year of college, and the change of attitude which occurred was a slower change than that which took place among the non-affiliated class groups.

Hypothesis three, that there exist no significant differences of attitudes between the affiliated and non-affiliated class groups, was also untenable. The two freshman groups differed on seven issues, the two sophomore groups on seven issues, the junior groups on ten issues, and the two senior groups on seventeen of the twenty-two selected issues.

The hypothesis that significant differences of attitudes between the affiliated and non-affiliated freshman groups are no fewer than between the affiliated and non-affiliated senior groups was tenable. The freshman samples differed on six of the issues while the senior samples differed on seventeen of the selected issues.

The last major hypothesis of the investigation, that significant differences of attitudes between the affiliated freshman and senior groups are no fewer than between the non-affiliated freshman an senior groups, was tenable at

the five per cent level of confidence. The affiliated freshman and senior samples differed on seven issues, while the non-affiliated freshman and senior samples differed on twelve of the issues contained in the study.

Conclusions

The attitudes of the affiliated sample tended to reflect the practices, activities, and values enunciated by the social fraternity. The affiliated group also tended to be more accepting of the practices of hazing, university censorship of a student publication, paying amateur athletes for their services, premarital sex relations, required class attendance, student control of a group's activities and policies, permitting secret organizations to exist within our society, and the use of alcoholic beverages. The same group reflected a less accepting attitude toward the issues of racial integration in college life, employing house mothers, and the presence of the honor system within the university. No differences of attitude at any level existed on four of the selected issues: teaching of a science which conflicts with religious beliefs, allowing college professors to express their own views within the classroom on controversial subjects, the inclusion of sex education within the college curriculum, and the end justifying the means in obtaining good grades.

The attitudinal changes reflected by both samples of the study do not appear to be a result of natural selection and/or dropouts. Since the chi square computations, in more instances than not, increased in size in the year to year comparisons (*i.e.*, the computations for the freshman-sophomore comparisons were smaller than the computations for the sophomore-junior comparisons), it appeared that the process of selection did not account for the differences. Had selection and drop-outs been responsible for the differences, the chi square computations of the freshman-sophomore comparisons would have been larger than those of the sophomore-junior comparisons since the largest percentage of drop-outs occurred at the end of the freshman year.

Implications

Since this investigation and related literature suggested that group membership has an effect upon the attitudes of individual members, it would appear that further study is necessary to determine the extent and nature of the attitudinal changes that may be brought about by affiliation with organized groups. The need for a longitudinal study of the attitudes of college students is suggested. The same study might be made on a nation-wide basis. Further refinements of the tools of research and measurement are needed. Although the tools of attitude measurement are as reliable

and valid as many psychological instruments, additional research is manc tory in the development of more refined instruments.

Other questions raised by the investigation included the followi (1) Does the social fraternity tend to reflect the upper middle class val more accurately than do the unorganized college groups represented o college campus? (2) Does the social fraternity have the primary respo bility of supporting, re-affirming, or strengthening, rather than chang the attitudes of its members? (3) To what extent do the attitudes of t new members within an organized group tend to gravitate toward the a tudes of the older members, or to what extent do the attitudes of the c members gravitate toward the attitudes of the new members?

. . . Physical Education

(Continued from page 27)

2. Similarly, conclusions drawn from the educator sample indic that good teaching in physical education is most frequently characteriz by effective instruction in skills and efficient program administration a organization.

3. In view of the finding that there were significant percentage diff ences between student and educator reports in the majority of the sub-are of behavior, it is recommended that a greater number of educators mig be included in a similar critical incident study in the future.

REFERENCES

1. Flanagan, John C., *et al. Critical Requirements for Research Personnel.* Pit burgh: American Institute for Research, 1949. 66 pp.
2. Flanagan, John C. "The Critical Incident Technique," *Psychological Bulleti* 51:327-58, July, 1954.
3. Garrett, Henry E. *Statistics in Psychology and Education.* New York: Lor mans, Green and Company, 1953. 460 pp.
4. Jensen, Alfred C. "Determining Critical Requirements for Teachers," *Journ of Experimental Education,* 20:79-85, September, 1951.
5. Smit, Jo Anne. *A Study of the Critical Requirements for Instructors of Gener Psychology Courses.* Unpublished doctoral dissertation, University of Pit burgh, 1951. 142 pp.

School Attitudes of Children In Special Classes for Mentally Retarded

CLARENCE J. JOHNSON and JOSEPH R. FERREIRA

There are differences of opinion concerning how children feel about being placed in special classes for the mentally retarded. Most discussion related to this question is based upon the speaker's subjective personal experience. A review of the literature emphasizes the relative lack of relevant research data. Such a paucity of objective information is surprising when one considers the extensive Special Education program which is now under way.

However, research on the attitudes of children poses certain methodological difficulties. There are special problems involved in studying the attitudes of mentally retarded children who have short attention spans, low reading and writing ability, and limited verbal understanding and expression. The method used in the study reported here attempted to overcome several of these problems and appears to furnish useful data concerning the attitudes of children placed in special classes.

Method of Study

The sample studied was composed of 199 of the children enrolled in the sixteen special classes for the mentally retarded administered through the Sacramento County Superintendent of Schools Office. This included all of the children enrolled in the special classes, with the exception of those absent at the time of the interview, and two children who, according to their teachers, did not wish to be interviewed.

The group included 149 boys and 50 girls ranging from the age six years, five months to 16 years and five months. There were 148 white children, 23 Negro children, and 28 children of Spanish or Mexican descent. Several of the children had been in the special class less than one month and others as long as four years and two months. Each child had been

Clarence Joseph Johnson is School Psychologist in the office of the Sacramento County Superintendent of Schools. He was previously a teacher of a special class for the mentally retarded. This article is partly based on the thesis he did for his master's degree which was conferred by Sacramento State College in 1954.

Joseph Roy Ferreira is School Psychologist and Director of Special Services in the South Sacramento School District. He has also served as a teacher of mentally retarded children, a teacher-psychometrist, and a vice-principal-counselor. This article is partly based upon his master's thesis. He received the degree from Sacramento College in 1956.

administered an individual intelligence test. The mean IQ was 69.5 with a range of 40 to 83.

Data were gathered through the use of an individual standardized interview which was comparatively simple to administer, considered the children's short attention span, and could be applied to the large number of children involved. This method was not affected by the children's limited reading or writing ability and provided sufficient information for an exploratory study of this nature. Items were selected to elicit specific information desired by people working in the program and to explore areas for further study.

As a pilot study the schedule was administered to all the children enrolled in two special classes. In addition, the schedule was administered to children in one of these classes by the second interviewer as a check on the reliability of the interview technique. The responses of each child to both questioners was essentially the same. The results of the pilot study indicated the applicability of the instrument and it was adopted for use with the remainder of the children.

The special class teachers were oriented during a regular staff meeting and were given an information form to be completed for each child. All children were interviewed within eight school days. To expedite and control the interviewing, the questioning was conducted by the writers, both of whom had previous experience in interviewing, individual testing, and teaching mentally retarded children. Immediately preceding the interview, the special teacher told her class, "A man is here at our school today to talk to many of the children. He wants to find out what you think about your school so that it can be made better for you." After the interviewer was introduced to the class, the children were questioned singly in another room. Following the interview, the children did not have an opportunity to speak to the others until all interviews with that class were completed.

Upon entering the interview room, each child was assured he could say anything he cared to when answering the questions and that his responses would be kept confidential. Warm up questions and attempts to demonstrate interest in the child and to identify with him were used in varying degrees as seemed necessary to establish rapport before beginning the interview. The use of a concealed tape recorder eliminated the necessity of the interviewer writing or otherwise diverting his attention from the child. The child was not asked to give his name. This seemed to satisfy the children and they generally were frank in their responses. The teacher furnished the order in which the children had left the room and this was matched with the recording to identify the children and code numbers were assigned to each interview. The recordings were available only to the two interviewers.

The children's responses were recorded and transcribed verbatim on the day the interviews were conducted. Upon completion of the interviews

and transcription of the data, the 42 responses and the 10 items of information collected through information sheets compiled by the teachers were tabulated and categorized under general headings by the two interviewers working together. The responses then were entered in tables for the presentation of the data and for the item analysis.

Findings

Following are some of the significant findings obtained by the method described, indicating the type of information made available concerning the children included in this study.

1. The children usually referred to their class by the name of the special teacher, by the room number, or by their grade number, and seldom used the term "special class," or "opportunity class," or volunteered the information that they were in the special class.

2. They gave varied reasons for being in the class. Reasons referring to their limited scholastic ability or slowness were mentioned most often. They also mentioned specific failures such as poor reading, or not learning the time tables. Other reasons were given that had no actual basis such as "My brother is in there," "I studied too much when I was young."

3. The child's last regular teacher or his present or former building principal was usually thought of as the person responsible for placement; however, parents or the special class teacher were sometimes named.

4. Speaking of their parents' attitude toward the special class, some of the children indicated a limited understanding of or sympathy with the program on the part of the adults in the home. For example, one child said, "My mother thinks I'm crazy"; another responded, "They think I will catch up"; another, "She thinks it's terrible." Most of the responses (60 per cent) reflected positive attitudes toward the classes on the part of the home. When asked whether their parents would rather have them in another class, 24 per cent of the children said "yes." A positive relationship ($r = .53$) was found between the child's attitude and his perception of his parents' attitude toward special education.

5. When asked if they liked their last regular class, 77 per cent of the children said "yes" and 22 per cent "no." When asked at two different times if they liked the special class, 91 per cent answered "yes" and 9 per cent said "no" both times. While this might be considered as evidence that the children, as a group, liked the special class somewhat better—the difference in responses to the two items was slight. Those who reported that they liked the last regular class tended not to like the special class. Those who reported that they disliked the last regular class tended to like the special class.

6. Some of the children had ambivalent feelings toward the special

class. While most of them said they liked it, many of them said they did not like it at first. However, for the children as a group, the length of time in the special class and negative attitude were not significantly related. Some who stated they "liked" the class said they were not "happy" in it. Apparently "happy" and "like" had different connotations for some of the children. It is possible that while some liked the special class, they were not happy that they could not be in a regular class. Reasons for liking the special class were many and varied, ranging from "the nice teacher," and "the way we do arithmetic," to "the work is easier."

7. Age of initial placement and negative attitude toward special education were not found to be significantly related. The majority of the pupils in the study group were nine years of age or older when initially placed. This factor may have contributed to the lack of relationship found in that there were few subjects who were placed prior to entering the intermediate grades.

8. The special class teacher usually was liked by the children in her class. The reasons given most often were "she is nice," "she is sweet," "she is good." Other reasons given were that she allowed the children to do special things such as coloring, basket-weaving, use tools, work with plaster and lacing. Some children liked the teacher because she "has time for us," "helps us more." Six per cent of the children interviewed named their teacher as their best friend. When asked which teacher they liked best, 69 per cent said they preferred the special teacher, and 20 per cent chose the last regular teacher.

9. Physical education, crafts and woodwork, and arithmetic were the subjects most frequently named as best liked by the children. Arithmetic ranked considerably higher than any of the other more academic subjects. When asked which subject they did not like to study at school, spelling was the most often mentioned activity.

10. The out-of-school interests of these children appeared to be like those of other children with the exception that only one of the mentally retarded named reading as his favorite activity.

11. The vocational interests and aspirations of the children interviewed were varied. Many were unrealistic, answering "doctor," "teacher," "pilot," "college student," etc. Other children chose attainable vocations and were realistic in talking about their reasons for making the choice in view of their limited ability. Forty-three per cent of the girls responding said they wanted to be nurses.

12. Forty-one per cent of the children interviewed said they had been called names because they were in the special class. Twenty-six per cent of the name-calling was done by the members of the special class, 48 per cent by children in the regular classes, and 23 per cent by children at home, at the child's former school, or on the school bus. Usually the name

referred to the child's slowness or academic inability such as "dummy" or "dumbbell." Often the names referred to the special class the child was in, such as "dumbbell class," "special class," "baby room." Terms such as "crazy" or "nutty" were used.

13. The children tended to select a member of the special class for their best friend. Fifty-nine per cent of those interviewed named a member of their class, 18 per cent named a child enrolled in a regular class, 6 per cent named a special class teacher, several named their mother or parents. Two children said, "Don't have any friends."

14. The girls were more negative toward special education than the boys. This may have been influenced by the fact that girls were in the minority in every class and in half of the classes there were three or less girls.

15. A variation in incidence of children with negative attitudes toward the special program was found among the different classes, ranging from 30 per cent of the children in one class, to 90 per cent in another.

Recommendations

The following recommendations are indicated for the special education program:

1. When considering a child for placement in the program, his attitude toward his regular class as well as the special class should be considered as should his parents' understanding of and attitude toward the program.

2. The decision to place a particular child should be made not only on the basis of information concerning that child, but also in terms of the particular special class in which he will be enrolled since special classes may differ markedly from each other.

3. This variation in classes should be examined to determine why some classes should contain such a high percentage of children with negative attitudes toward the class.

4. The importance of adequate orientation of both parents and child is indicated.

5. The development of realistic vocational aspirations and goals for these children should be given greater attention. This may be dependent upon understanding on the part of the parents.

6. Further research is needed, especially in the areas of placement procedure, curriculum, and the selection of teachers for the special program. The method employed in this study might prove useful in carrying out such research.

Teachers' Institutes – Pro and Con

DELWYN G. SCHUBERT

Compulsory institute attendance for teachers is commonplace in many school systems. Some teachers feel they benefit a great deal from institutes; others are not happy with the system.

An attempt was made to systematize teachers' commendations and criticisms of institutes in hopes of uncovering ways whereby they could be made more profitable. During the fall semester and summer session of 1956 and 1957, respectively, 102 experienced elementary and secondary teachers wrote anonymously in response to the following queries: In what ways have you benefited from teachers' institutes? What is wrong with teachers' institutes? Representative comments in order of their frequency are categorized as follows.

Ways in Which Teachers Benefit From Institutes

Improved Methodology: One experienced teacher said: "Institutes give me a chance to get acquainted with other teachers' viewpoints on various methods, devices, and ways of attacking problems I face." Others with similar opinions stated: "They give me a wonderful chance to exchange ideas on the practical side as to teaching aids and materials that can be recommended by someone who has put them into actual use." "Institutes have furnished me with countless practical, down-to-earth teaching methods and techniques at my grade level—spelling games, arithmetic games, better ways of maintaining classroom control, etc." "Institutes have given me a chance to pick up valuable methods and ideas for teaching. And more important, I've learned of sources of getting materials I never would have known about." "Institutes have brought me in contact with new books, pamphlets, motion pictures, etc., that have been helpful in my teaching." "Institutes have made me a more effective teacher by equipping me with solutions for problems that arise in daily teaching."

Inspiration: Many teachers stressed the inspirational value of institutes. Replies included: "The greatest value of institutes accrues from their stimulating me to go back to the classroom and do a bigger and better job than I've done before." "One institute so inspired me that I wrote a poem, which sold, got a prize, and later appeared in book form. Most institutes don't

Delwyn G. Schubert is an associate professor of education and director of the reading clinic at Los Angeles State College of Applied Arts and Sciences. He holds the degree of doctor of philosophy.

do much more than inspire me, but that in itself is very important to a teacher." "Most valuable to me is the inspiration a prominent person who is not in education can give by showing us why we should be proud of our profession." "A number of institutes have stimulated me to return to the old salt mine with new zest and enthusiasm. We've really had some inspirational speakers this last year."

Socialization: A surprising number of teachers felt that institutes had social value. They made statements such as the following: "Institutes help develop an esprit de corps among teachers. Sitting in a large audience with people with whom you have a lot in common gives one a warm feeling." "I enjoy very much meeting teachers and administrators from other districts and feel that this helps me in my teaching." "I feel enriched by the personal contact I have with the many teachers I meet at institutes. Maybe it's because I enjoy visiting so much." "Making friends is one of the most important things a new teacher can do. Institutes help the new teacher feel a part of the profession." "Through institutes I became acquainted with a lot of interesting people who were able to give me their personal viewpoints on various approaches to better teaching." "Visiting with associates is important and provides a break in the general routine which is generally welcomed by all teachers. Everyone needs a change. Institutes help."

What Is Wrong With Teachers' Institutes

Lack of Practicality: One teacher said, "I would like institute lecturers to be specific and give concrete suggestions as to how to teach certain skills or subjects. I dislike sitting for an hour listening to an expert say that geography is important when the title of his lecture is 'How to Teach Geography in the Elementary School.'" In a similar vein others stated: "What teachers want, but seldom get, are institutes where usable methods and ideas are developed or exchanged." "I have attended approximately ten institutes. While one or two offered me some ideas which I could use in my classroom, most of them gave me no usable material." "Give me something I can use. Forget the theory already given in college and the literature."

Poor Speakers Who Fail to Inspire: Replies included: "I would like at least one inspirational speaker included in pre-school institutes. I need inspiration at that time of the year, more than at any other time." "Institute speakers chosen to impart knowledge are most often dull and uninteresting. I get something from the dynamic speaker who can inspire his listeners because he believes that he is giving something worth while." "Too many institute speakers are dead on their feet. They might know their stuff but they surely can't put it across." "Materials presented in a dry, uninteresting manner fall on deaf ears."

Bad Timing: Many of the teachers seemed strongly opposed to after-school institutes. They said, for example: "Most other professions hire lecturers, etc., during their working hours. Why should we spend our after school hours in institute sessions?" "When teachers are called after a day in overcrowded classrooms, with all the pressures and duties that accompany a teaching day, it's hard to keep alert." "Many times these meetings are held at the close of the day when teachers are exhausted and anxious to get home. Teachers are not, therefore, in a receptive mood. If institutes are so important, let's have them at some other time."

Compulsion: Specific remarks in this category included: "Institutes should not be compulsory. How many other jobs require attendance at meetings after hours in order to receive full pay?" "If they were not mandatory, institutes would be easier to take. Adults, like children, do not like to be forced into things." "The majority of teachers are taking courses for growth value and should not be forced into attending institutes. After all, you can lead a horse to water but you cannot make him drink."

Speakers Not Well Informed: "No one knows all the answers but many institute speakers don't seem to know any of them." "We need more speakers who are well informed in the most recent research and in various phases of education." "Too often institutes are presented by a panel of non-experts, who depend on one another for information." "More speakers should realize that there is no substitute for knowing your stuff."

Other responses of a miscellaneous nature included such things as complaints about institutes lasting too long, their not permitting sufficient audience participation, and their being too general.

The foregoing responses are indicative of the positive and negative feelings teachers have toward institutes and are suggestive of ways whereby institutes could be changed to meet more adequately the needs of teachers.

A new publication of the U. S. Office of Education contains summaries of studies on industrial education problems published from 1930 to 1955. There are 3801 entries in the 527-page book. The studies are classified according to the particular aspect of industrial education considered. Classifications include administration, guidance, instruction, and teacher education. Curriculm is found as a subdivision under the major classification labeled "instruction." The studies are summarized with differing degrees of thoroughness. In most cases the abstracts contain brief descriptions of purpose, source of data, and findings and conclusions. The publication is titled *Research in Industrial Education*, and it is Vocational Division Bulletin No. 264, Trade and Industrial Series No. 65. It is available from the U. S. Government Printing Office for $1.75.

Book Reviews

STUDIES IN SCHOOL ADMINISTRATION

By Hollis A. Moore, Jr.

Washington, D. C.: American Association of School Administrators, 1957. 202 pages, paper.

This book is a report on the work of the Cooperative Program in Educational Administration. The author is the executive secretary of the Committee for the Advancement of School Administration, the arm of the AASA that was in charge of the Program, which was financed by the W. K. Kellogg Foundation of Battle Creek.

The record is impressive even though not complete. A number of publications of CPEA centers are still in the process of being edited. However, this volume collects in one place an annotated record of all the reports, books, articles, papers, and other publications arising out of the CPEA's ten years of activity on the American educational scene.

The materials are grouped under six major headings. These are: "The Job of Administering Schools," "Administrators for the Future," "In-Service Help for Today," "Relationship of School to Community," "Organization for Efficiency," and "Schoolboard Functions." A chapter is devoted to each. Then, at the end, there is an appendix giving a cross-reference of CPEA publications.

Although the annotations are not all equally clear, the work as a whole is well done. Every person interested in research related to school administration, as well as those specializing in the field, should have a copy for its reference value.

The chief criticism does not really apply to the book, but to the framework of the activities it reports. There is no question about the need for study and improvement of school administration. The goal of professionalization set forth in the introductory chapter is laudable. But the narrowness of vision exhibited is lamentable.

Nowhere is there any evidence that school administrators are conceived as being professional educators. All of the goals of professional responsibility, competence, and status refer only to administrators in their managerial capacity. There is some evidence that administration is considered as being separate from instructional leadership. It is not even clear that teaching experience would be required for selection and qualification as an administrator.

It must be remembered that this book is a report. It may be that this short-sighted and divisive attitude is truly representative of the people

involved in CEPA. If so, it would seem that the project has done more harm than good despite its impressive set of publications. If not, it would seem very desirable to spell out better (perhaps in a revision of this report) the place of administration in the profession of education.

SCHOOL PROBLEMS IN HUMAN RELATIONS

By Lloyd and Elaine Cook

New York: McGraw-Hill Book Co., Inc., 1957. 292 pages. $5.00.

This volume is primarily a collection of case studies of school situations involving interpersonal and intergroup relations. It makes very interesting, one can almost say entertaining, reading. A general perusal of the book will prove valuable to any experienced educator simply because of the wide variety of practical situations that are reported and discussed. Reading it will give vicarious experience of a range of problems that would normally only be met with in person during the course of several lifetime careers in education. However, it is probable that students who have not had some actual experience with educational problems will not profit nearly so much as will teachers and others who are in service.

The authors use a case-study approach in their own treatment of the cases they study. In other words, after presenting a case they frequently go on to present a description of how this particular case study was received by one of their classes. In a way, this makes the book more valuable because it shows how the material it contains can be used. On the other hand, it also tends to make the writing somewhat diffuse and to detract from the impact that would otherwise be made by the original case.

There is no doubt that the authors are correct in their contention that human relations problems are central to the practice of education. The case studies they present reinforce this conclusion. There is also no reason to quarrel with the way in which the book is organized around such general areas of concern as the beginning teacher, school and home relations, intergroup relations, school head and staff relations, and so on. However, the general impression of the book is not good.

Probably the most serious shortcoming is the general diffuseness of the writing and organization. If it were presented simply as a collection of case studies, or readings, in human relations problems related to education, it would be much less subject to valid criticism. As it is, the reader is almost certain to find himself wondering what it is all about long before he reaches the end. Unfortunately, even at the end, he is apt to still be wondering.

The other serious shortcoming is the apparent lack of knowledge on the part of the authors of some of the more recent developments in administrator-staff relations. In particular, the book contains no adequate consideration of

the role of professional organizations and committees in school human relations. This is not due to chance or to a deliberate design to avoid such matters. One of the case studies in the chapter on "School Head and Staff Relations" deals with a struggle by teachers for higher salaries. The activities of a local association and the problems it faced in carrying them on are well described. However, the association and the outcomes of its activities are far from being typical of modern professional organizations. It may be that the authors are unfamiliar with areas in which professional development has been typical. However, in view of the nature of the cases presented throughout most of the book, it appears more likely that they have been betrayed by their own experience. The professional organizations common in colleges and universities are very much less active and aggressive in human relations areas than are those to be found in elementary and secondary schools. The authors probably do not realize this.

If the book is used with care as collateral reading in courses in education and educational administration, it should prove valuable as a source of interesting case material. It will also prove valuable to experienced teachers and administrators in vicariously widening the scope of their experience with school problems.

BETTER EDUCATION FOR NONACADEMIC PUPILS

By Kenneth N. Nickel
North Central Association of Colleges and Secondary Schools, April 1957

(May be obtained from R. Nelson Snider, Treasurer of the North Central Association, North Side High School, Fort Wayne, Indiana. Single copies 25¢. Quantities of ten or more 15¢ each.)

This pamphlet reports a study of ways of making provision for students other than those interested and able in academic matters. It was undertaken because many schools have shown concern for this category of the school population, the nonacademic pupil. Included in this group as defined in the study were educationally retarded, slow learners, and educable mentally retarded. According to the author the term nonacademic, as used in this report, "refers to those pupils who fail to learn effectively by means of the usual teaching methods which involve abstractions, symbols, and general verbal principles."

After a brief review of other studies made in this area, the author describes the survey conducted by the North Central Association. The results of the study indicated that curricular emphasis for non-academic students should be on social adjustment, occupational self-sufficiency, and citizenship. Formulating a curriculum that will do this is likely to be a difficult task for both administrators and teachers. It is recommended that most serious consideration be given to a core program containing all

required subjects. It is recognized, however, that such a course must be under an outstanding teacher if it is to be effective.

Perhaps the most significant recommendation made as a result of the study is that, ". . . teachers and administrators must actively cooperate to make the program of educating nonacademic pupils succeed. If teachers and administrators are not enthusiastic but merely regard this program of education as an added 'chore,' there is little likelihood of success."

In view of this it is perhaps not surprising that the study revealed that there was a marked divergence between authorities in education and the school surveyed in evaluating various in-service training devices designed to make teachers better able to provide for nonacademic students. Nevertheless, the study did appear to indicate the need for an active program of inservice training aimed at making teachers more aware of ways to cope with the non-intellectual type of student.

It may be that this study is somewhat of a rehash of an old topic. Certainly it reveals a much greater lack of provision for nonacademic students in the member schools of the North Central Association than would have been expected on the basis of experience with California schools. In some ways, the topic of the study may seem to be untimely—now much of the public and professional interest is directed toward efforts to increase the respectability of academic learning. However, much lip-service has been paid to individualization of the curriculum designed to provide for the needs of all students. Regardless of current international developments, a large part of the American people are nonacademic. This well-done and well-reported study is worthy of consideration if only because of this fact of life.

EDITORIAL STAFF CHANGES

On January 1, 1958, Dr. Kenneth R. Brown left the directorship of the California Teachers Association Research Department to assume a new position as an executive assistant to Dr. Arthur F. Corey. Dr. Brown will be generally responsible for the professional standards activities of the Association. Since these include research, he will still be active in this field. His place as Director of the Research Department is being taken by Dr. Garford G. Gordon, formerly Assistant Director.

The new Assistant Director of Research is Dr. John H. Bright, formerly Chairman of the Department of Education at Whittier College. Dr. Bright was at Whittier for nine years. Prior to going there he was a high school teacher and college instructor in Ohio. He received his doctorate from the University of Cincinnati in 1950.

As will be seen from the inside of the front cover, Dr. Gordon is now editor of the CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH and chairman of the Advisory Council. Dr. Bright is taking his place as associate editor and as secretary to the Council. Mrs. Anne T. Protopopoff continues as editorial assistant and CTA research librarian.

CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH

Published by
California Teachers Association
693 Sutter Street
San Francisco 2, California

INFORMATION AND INSTRUCTIONS REGARDING MANUSCRIPTS

The California Journal of Educational Research welcomes original manuscripts on educational research. The types of material desired are:

1. City and county school research pertaining to curriculum, guidance and counseling, evaluation, supervision, and finance.

2. Digests of theses and dissertations that have practical application. Such theses and dissertations, however, must officially be approved for publication by a member of the Editorial Board (see names on inside of front cover) or by the college or university at which the research was done.

3. Studies that present novel, but tested, approaches to the solution of educational problems.

Manuscripts, except for feature articles, should be limited to approximately 1500 words. They should be typewritten double-spaced, on one side of the paper, and submitted in duplicate. Only original manuscripts will be accepted for publication.

Tables, charts and graphs often enhance a research report. When used, they should be clearly and accurately labeled. They should also be inked to size and their places designated in the manuscript.

Footnotes should be complete as to author, title, publisher, date and pages. Bibliographies accompanying manuscripts should also be complete as to data, and should be arranged alphabetically by authors.

Manuscripts will not be returned unless the author so requests, in which case a stamped, self-addressed envelope should accompany the manuscript.